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**Declaration under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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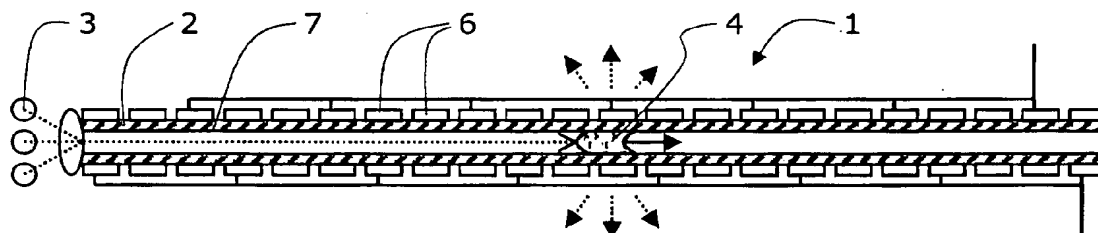
— with international search report

(88) Date of publication of the international search report:

2 March 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DISPLAY FIBERS AND DISPLAYS MADE THEREOF



(57) Abstract: The present invention relates to an elongated display fiber (1) comprising an optical fiber body (2) having a plurality of pixel positions distributed along the length of said fiber (1). At least one light source (3) is arranged to selectively illuminate said fiber (1) from at least one end thereof. Addressing means are operably associated with said fiber for sequential addressing of one of each of said pixel positions. The display fiber (1) further comprises means for selectively causing said fiber (1) to emit light at said addressed one of said pixel positions. The present invention further relates to a display apparatus (11) comprising at least one elongated display fiber (1) according to the present invention.

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## INTERNATIONAL SEARCH REPORT

 International Application No  
 PCT/IB2005/050646

## A. CLASSIFICATION OF SUBJECT MATTER

G02B6/16      G02B6/00      G02B6/20      G02F1/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G02B    G02F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 106 181 A (ROCKWELL, III ET AL) 21 April 1992 (1992-04-21) figures 1-9	1,10-17
Y	WO 02/069016 A (LIGHTWAVE MICROSYSTEMS CORPORATION) 6 September 2002 (2002-09-06) abstract	2-4
X	FR 2 669 745 A (BEHELANI JEAN-MICHEL; LAUPAU YVES; NAOUM JOSEPH) 29 May 1992 (1992-05-29)	1
Y	figures 1,2	2-4
A	US 5 771 321 A (STERN ET AL) 23 June 1998 (1998-06-23)	
A	US 5 317 667 A (WEBER ET AL) 31 May 1994 (1994-05-31)	
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

19 July 2005

Date of mailing of the international search report

24. 11. 2005

Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB2005/050646

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>PATENT ABSTRACTS OF JAPAN vol. 008, no. 282 (P-323), 22 December 1984 (1984-12-22) &amp; JP 59 148030 A (SONY KK), 24 August 1984 (1984-08-24) abstract</p> <p>-----</p>	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2005/050646

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5106181	A	21-04-1992	NONE	
WO 02069016	A	06-09-2002	WO 02068821 A2 US 2003006140 A1	06-09-2002 09-01-2003
FR 2669745	A	29-05-1992	AT 121545 T CA 2095434 A1 DE 69109130 D1 EP 0558600 A1 WO 9209909 A1 JP 6502929 T	15-05-1995 24-05-1992 24-05-1995 08-09-1993 11-06-1992 31-03-1994
US 5771321	A	23-06-1998	CA 2241823 A1 EP 0888573 A2 JP 2000505911 T WO 9731288 A2	28-08-1997 07-01-1999 16-05-2000 28-08-1997
US 5317667	A	31-05-1994	NONE	
JP 59148030	A	24-08-1984	NONE	

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2005/050646

### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
1-4, 10-17

#### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4,10-17

annular display fiber with electrowetting material

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2. claims: 1,5,6

Display fiber with conic sections

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3. claims: 1,7-9

Display fiber bundle

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